

APPENDIX B: CLEAN COPY OF PENDING CLAIMS

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1. (Amended) An endovascular graft for supporting a preselected length of a patient's body lumen comprising a plurality of separate graft members configured to be separately layered in a deployment state in the body lumen with at least two of the graft members having a length greater than the preselected length of the patient's body lumen.

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19. (Amended) A graft for treating a length of a patient's body lumen comprising a plurality of thin wall graft members configured to be separately layered in a deployed state in the body lumen with at least two layers of thin wall graft members present across the length of the patient's body lumen being treated.

20. (Amended) The graft of claim 19 wherein the patient's body lumen that is treated is an artery and none of the thin wall graft members in a non-layered state is sufficient to maintain a flow of blood therethrough and prevent leakage.

21. (Amended) The graft of claim 19 wherein the plurality of thin wall graft members comprise at least 3 thin wall graft members.

22. (Amended) The graft of claim 19 wherein the thin wall graft members comprise an inner most thin wall graft member and at least one other thin wall graft member, wherein the inner most thin wall graft member has an axial length greater than the other thin wall graft members of the graft and extends longitudinally beyond a distal end and proximal end of the other thin wall graft members.

23. (Amended) The graft of claim 19 wherein the thin wall graft members comprise a longitudinal axis and are configured to expand to a transverse dimension relative to the longitudinal axis of up to about 40 mm and can be constrained to a minimum transverse dimension of down to about 3 mm.

24. (Added) The graft of claim 1 wherein no single graft member has sufficient mechanical strength in the deployment state to provide a desired amount of support for the preselected length of the patient's body lumen.

25. (Added) The graft of claim 24 wherein the plurality of separate graft members comprise at least three graft members, wherein the at least three graft members are configured to provide sufficient mechanical strength to provide a desired amount of support for the preselected length of the patient's body lumen only in portions of the endovascular graft where the all the graft members are overlapped.

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26. (Added) The graft of claim 1 wherein the plurality of separate graft members comprise an inner most graft member and at least one other graft member, wherein the inner most graft member has an axial length greater than the other graft members and extends longitudinally beyond a distal end and proximal end of the other graft members.

27. (Added) The graft of claim 1 wherein the plurality of separate graft members are configured to be expanded to a maximum transverse dimension of up to about 40 mm and constrained to a minimum outer transverse dimension down to about 3 mm.

28. (Added) The graft of claim 1 wherein each of the plurality of separate graft members comprise an anchoring mechanism at both ends, wherein at least two of the plurality of separate graft members have a longitudinal length sufficient to span the preselected length of the patient's body lumen and engage tissue of sufficient integrity to support the anchoring mechanisms at both ends of the at least two separate graft members.

29. (Added) The graft of claim 1 wherein at least one of the separate graft members is bifurcated.

30. (Added) The graft of claim 1 wherein at least one of the plurality of separate graft members comprises a linking means for securing the separate graft members to each other.

31. (Added) The graft of claim 1 wherein the separate graft members comprise a membrane means coupled to a frame means that supports the membrane means.

32. (Added) A method of deploying an endovascular graft within a body lumen, the method comprising:

deploying a first graft member at a section of the patient's body lumen being treated;

delivering at least one additional graft member within a longitudinal lumen of the deployed first graft member; and

deploying the at least one additional graft member within the longitudinal lumen of the deployed first graft member such that an overlapped portion of the first graft member and the at least one additional graft member span the section of the patient's body lumen being treated.

33. (Added) The method of claim 32 wherein the at least one additional graft member comprises an inner most graft member that extends longitudinally beyond a proximal end and a distal end of the first graft member and directly engages the body lumen proximally and distally of the section of the patient's body lumen being treated.

34. (Added) The method of claim 33 comprising anchoring the inner most graft into the body lumen both proximally and distally beyond the section of the patient's body lumen being treated.

35. (Added) The method of claim 32 wherein the at least one additional graft members comprises two graft members.

36. (Added) The method of claim 30 wherein at least one of the first graft member and the at least one additional graft member is bifurcated.

37. (Added) The method of claim 32 comprising percutaneously delivering the first graft member into the body lumen.

38. (Added) A multi-layered endovascular graft comprising:
a first graft member comprising a membrane and a support structure that define a lumen;

one or more additional graft members that each comprises a membrane and a support structure,

wherein the one or more additional graft members are configured to be layered *in situ* within the lumen of the first graft member such that an overlapped portion of the first graft member and the one or more additional graft members spans a length of a compromised portion of a body lumen.

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39. (Added) The endovascular graft of claim 38 wherein the first graft member and the one or more additional graft members comprise anchoring mechanisms on proximal and distal ends.

40. (Added) The endovascular graft of claim 38 wherein at least one of the membrane of the first graft member and the membrane(s) of the one or more additional graft members comprises ePTFE.

41. (Added) The endovascular graft of claim 38 wherein at least one of the membranes of the first graft member and the membrane(s) of the one or more additional graft members has a thickness of between approximately 0.002 inches and 0.008 inches.

42. (Added) The endovascular graft of claim 38 wherein the first graft member is bifurcated.